**FINAL GROUP PROJECT - TEXT DOCUMENT**

**Stock Price prediction using Machine and Deep learning techniques**

During this week we worked on analysis of raw data. We could see that stock market can be analyzed through fundamental and technical analysis as the data contained multivariable features.

Fundamental analysis involving analysis of company’s future profitability based on its current business environment and financial performance.

Technical analysis is based on analyzing charts and using statistical figures to identify trends in the market.

We decided to focus more on Technical analysis as we will be able to interpret results with various models.

We also worked on visualizations and then the model selection by calculating Moving Average to determine overall performance.

We will be further working to improve model accuracy

We went through below websites and articles to understand and implement the prediction models in our project.

* <https://www.datacamp.com/community/tutorials/>
* Linear regression: <https://towardsdatascience.com/introduction-to-machine-learning-algorithms-linear-regression-14c4e325882a>
* Logistic regression: <https://towardsdatascience.com/understanding-logistic-regression-step-by-step-704a78be7e0a>
* KNN: <https://www.analyticsvidhya.com/blog/2018/03/introduction-k-neighbours-algorithm-clustering/>
* Auto ARIMA: <https://www.analyticsvidhya.com/blog/2018/08/auto-arima-time-series-modeling-python-r/>
* Prophet: <https://medium.com/open-machine-learning-course/open-machine-learning-course-topic-9-part-3-predicting-the-future-with-facebook-prophet-3f3af145cdc>
* Long Short Term Memory (LSTM): <https://towardsdatascience.com/illustrated-guide-to-lstms-and-gru-s-a-step-by-step-explanation-44e9eb85bf21>

We have divided the responsibility within the team based on models.

Auto ARIMA – Shabarinath

Recurrent Neural Networks – Sasank

Linear Regression and KNN Models - Manideep